

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-41 (cancelled).

Claim 42 (New): A hemodialysis apparatus, comprising:

(a) means for delivering extracorporeal blood to a hemodialyzer and for controlling at least one extracorporeal-blood parameter selected from the group consisting of (i) blood-flow rate, (ii) arterial pressure, (iii) venous pressure, and (iv) anticoagulant delivery to the extracorporeal blood; and

(b) a user/machine interface operably connected to said means for delivering extracorporeal blood, the user/machine interface comprising a touch screen adapted to display an indicium corresponding to a parameter pertinent to operation of the hemodialysis machine and to permit the user, by touching the indicium, to cause a change in the parameter.

Claim 43 (New): A hemodialysis apparatus, comprising:

(a) a dialysate-delivery system for supplying dialysate to a hemodialyzer, the dialysate-delivery system comprising at least one unit selected from the group consisting of (i) a dialysate preparation unit, (ii) a dialysate-circulation unit, (iii) an ultrafiltrate-removal unit, and (iv) a dialysate-monitoring unit; and

(b) a user/machine interface operably connected to the dialysate-delivery system, the user/machine interface comprising a touch screen adapted to display an indicium corresponding to a parameter pertinent to operation of the hemodialysis machine and to permit the user, by touching the indicium, to cause a change in the parameter.

Claim 44 (New): A hemodialysis apparatus, comprising:

(a) a dialysate-delivery system connectable to a hemodialyzer for supplying dialysate to the hemodialyzer, the dialysate-delivery system comprising at least one unit selected from the

group consisting of (i) a dialysate-preparation unit, (ii) a dialysate-circulation unit, (iii) an ultrafiltrate-removal unit, and (iv) a dialysate-monitoring unit;

(b) an extracorporeal blood-delivery system connectable to the hemodialyzer for routing extracorporeal blood to the hemodialyzer in coordination with the dialysate-delivery system, the extracorporeal blood-delivery system comprising at least one unit selected from a group consisting of (i) a blood-circulating unit, and (ii) a blood-monitoring unit;

(c) a controller connected to and controllably operating the dialysate-delivery system and the extracorporeal blood-delivery system; and

(d) a touch screen connected to the controller, the touch screen adapted to display an indicium corresponding to a parameter pertinent to operation of the hemodialysis apparatus and to permit a user, by touching the indicium, to cause a change in the parameter.

Claim 45 (New): A hemodialysis apparatus, comprising:

(a) first and second systems operably connected with each other, the first system being operable to deliver extracorporeal blood from a source to a blood compartment of a hemodialyzer, and the second system being operable to deliver dialysate from a source to a dialysate compartment of the hemodialyzer; and

(b) a touch screen connected to the first and second systems, the touch screen adapted to display an indicium corresponding to a parameter pertinent to operation of the first and second systems and to permit a user, by touching the indicium, to cause a change in the parameter.

Claim 46 (New): A hemodialysis apparatus, comprising:

(a) a dialysate-delivery system for supplying dialysate to a hemodialyzer, the dialysate-delivery system comprising at least one unit selected from the group consisting of (i) a dialysate-preparation unit, (ii) a dialysate-circulation unit, (iii) an ultrafiltrate-removal unit, and (iv) a dialysate-monitoring unit; and

(b) a user/machine interface operably connected to the dialysate-delivery system, the user/machine interface comprising a touch screen that displays information corresponding to a

setting of a parameter pertinent to operation of the hemodialysis machine, the touch screen being operable to display an indicium permitting the user to perform, using the touch screen, at least one step of a procedure for changing the setting of the parameter.

Claim 47 (New): The apparatus of claim 46, wherein the parameter can have a value that changes with time.

Claim 48 (New): The apparatus of claim 46, wherein the touch screen, responsive to an operator touching the indicium, is operable to display a numerical keypad that is touchable by the operator in performing the procedure for changing the setting of the parameter.

Claim 49 (New): A hemodialysis apparatus, comprising:

(a) an extracorporeal-blood-delivery system for supplying extracorporeal blood to a hemodialyzer, the extracorporeal-blood-delivery system comprising at least one unit selected from the group consisting of (i) a blood-circulating unit, and (ii) a blood-monitoring unit; and

(b) a user/machine interface operably connected to the extracorporeal-blood-delivery system, the user/machine interface comprising a touch screen that displays information corresponding to a setting of a parameter pertinent to operation of the hemodialysis machine, the touch screen being operable to display an indicium permitting the user to perform, using the touch screen, at least one step of a procedure for changing the setting of the parameter.

Claim 50 (New): The apparatus of claim 49, wherein the blood-circulating unit comprises a blood pump.

Claim 51 (New): The apparatus of claim 49, wherein the blood-monitoring unit comprises at least one of a blood-flowrate controller, a venous pressure monitor, and an arterial pressure monitor.

Claim 52 (New): A hemodialysis apparatus, comprising:

(a) a dialysate-delivery system connectable to a hemodialyzer for supplying dialysate to the hemodialyzer, the dialysate-delivery system comprising at least one unit selected from the

group consisting of (i) a dialysate-preparation unit, (ii) a dialysate-circulation unit, (iii) an ultrafiltrate-removal unit, and (iv) a dialysate-monitoring unit;

(b) an extracorporeal-blood-delivery system connectable to the hemodialyzer for routing extracorporeal blood to the hemodialyzer in coordination with the dialysate-delivery system, the extracorporeal blood-delivery system comprising at least one unit selected from a group consisting of (i) a blood-circulating unit, and (ii) a blood-monitoring unit;

(c) a controller connected to and controllably operating the dialysate-delivery system and the extracorporeal-blood-delivery system; and

(d) a user/machine interface operably connected to the dialysate-delivery system and the extracorporeal-blood-delivery system, the user/machine interface comprising a touch screen that displays information corresponding to a setting of a parameter pertinent to the hemodialysis machine, the touch screen being operable to display an indicium permitting the user to perform, using the touch screen, at least one step of a procedure for changing the setting of the parameter.

Claim 53 (New): A hemodialysis machine, comprising:

(a) means for controlling a dialysate parameter selected from a group consisting of dialysate temperature and dialysate concentration, and means for delivering the dialysate to a dialysate compartment of a hemodialyzer; and

(b) a user/machine interface operably connected to said means for controlling the dialysate parameter, the user/machine interface comprising a touch screen adapted to display an indicium corresponding to a parameter pertinent to operation of the hemodialysis machine and to permit the user, by touching the indicium, to cause a change in the parameter.

Claim 54 (New): A hemodialysis apparatus, comprising:

first and second systems operably connected with each other, the first system being operable to deliver extracorporeal blood from a source to a blood compartment of a hemodialyzer, and the second system being operable to deliver dialysate from a source to a dialysate compartment of the hemodialyzer, the first and second systems each including a pump to deliver the respective extracorporeal blood and dialysate;

a touch screen connected to the first and second systems, the touch screen adapted to display an indicium corresponding to a parameter pertinent to operation of the first and second systems and to permit a user, by touching the indicium, to cause a change in the parameter.

Claim 55 (New): A hemodialysis machine, comprising:

means for controlling a dialysate parameter selected from a group consisting of dialysate temperature and dialysate concentration, and means for delivering the dialysate to a dialysate compartment of a hemodialyzer;

a user/machine interface operably connected to said means for controlling the dialysate parameter, the user/machine interface comprising a touch screen adapted to display an indicium corresponding to a parameter pertinent to operation of the hemodialysis machine and to permit the user, by touching the indicium, to cause a change in the parameter; and

a memory storing at least one of firmware and software that enables the user/machine to interface and control the means for controlling the dialysate parameter.